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Report to the Congress of the United States

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December 1985

SYNTHETIC FUELS

Status of the Great Plains Coal Gasification Project—August 1, 1985

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United States
General Accounting Office
Washington, D.C. 20548

Comptroller General
of the United States

B-220697

December 24, 1985

To the President of the Senate and the
Speaker of the House of Representatives

This is the eighth report on the loan guarantee for an alternative fuel demonstration project awarded to Great Plains Gasification Associates. Our audit is required by the Department of Energy Act of 1978--Civilian Applications (Public Law 95-238). The report discusses the status of the project, including the August 1, 1985, default by the project sponsors on the $1.54 billion federal guaranteed loan. The Department of Energy is continuing to operate the coal gasification plant pending a decision about the project's future.

We are sending copies of this report to the Director, Office of Management and Budget; the Secretary of Energy; the Chairman, U.S. Synthetic Fuels Corporation; and other interested parties.

Charles A. Bowsher

Charles A. Bowsher
Comptroller General
of the United States

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Executive Summary

In December 1984, the Great Plains Gasification Associates had essentially finished constructing the nation's first commercial-scale coal gasification plant. As of July 31, 1985, Great Plains had contributed about $537 million in equity to the project and had borrowed $1.54 billion against a federal loan guarantee made available by the Department of Energy (DOE). Since 1983 the project has faced deteriorating financial projections in the wake of declining energy prices.

This is GAO's eighth semiannual report on Great Plains and covers the project's progress from January through August 1, 1985. GAO's objectives were to report on (1) the status of Great Plains' attempt to obtain additional federal financial assistance and (2) the status of the project's operational startup activities as of August 1, 1985. The Department of Energy Act of 1978 requires GAO to report on the status of the loan guarantee.

Background

In January 1982 DOE awarded a loan guarantee to the Great Plains Gasification Associates to build a plant producing synthetic natural gas from coal. The project was designed to produce 137.5 million cubic feet of synthetic natural gas per day.

The January 1982 loan guarantee agreement allowed the Great Plains partnership—subsidaries of five companies: Transco Energy Company, Tenneco Inc., MidCon Corporation, Pacific Lighting Corporation, and American Natural Resources Company—to borrow up to 75 percent of the plant's construction and startup costs not to exceed $2.02 billion. As of July 31, 1985, construction and startup costs totaled $2.07 billion.

The Great Plains sponsors notified DOE in November 1983 that they were considering terminating participation in the project unless they received additional financial assistance in price guarantees from the U.S. Synthetic Fuels Corporation. On July 16, 1985, the Synthetic Fuels Corporation approved an agreement in principle for up to $720 million in price guarantees subject to restructuring of the DOE-guaranteed loan. DOE's approval was required because the proposed agreement would affect its loan guarantee agreement with Great Plains.

Results in Brief

Even though the Synthetic Fuels Corporation approved price guarantees in principle for Great Plains, DOE announced, on July 30, 1985, that it would not agree to restructuring its guaranteed loan. DOE rejected the proposed agreement, saying that it would not assure long-term plant

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operation at a reasonable cost to the taxpayers. The Great Plains sponsors then terminated their participation in the project on August 1, 1985, and defaulted on the $1.54 billion DOE-guaranteed loan. DOE directed the project administrator, ANG Coal Gasification Company, to continue plant operations pending a DOE decision about the project's future. DOE is assessing options including operating, leasing, selling, shutting down, mothballing, and scrapping the plant.

GAO's Analysis

Financial Status

A March 1983 Great Plains' cash-flow projection estimated that the project would incur pre-tax losses of $382 million through 1996. Further, a September 1983 Great Plains projection estimated pre-tax losses of $1.2 billion during the same period and forecast large project-related after-tax losses and negative cash flows during the first 10 years of operations. The Great Plains parent companies were concerned that the projected losses and negative cash flows would diminish their consolidated earnings, weaken their credit ratings, increase their cost of capital, and drain capital from their other businesses.

In view of the deteriorating financial outlook, the project sponsors began negotiating with the Synthetic Fuels Corporation in September 1983 to obtain additional federal assistance for the coal gasification project. In April 1985, representatives of the corporation and Great Plains reached a tentative agreement on $820 million in price guarantees and additional equity contributions of $190 million.

In May 1985, the Synthetic Fuels Corporation's board of directors decided to explore other approaches aimed at restructuring and extending the repayment schedule of the DOE-guaranteed loan to permit a lower level of price guarantees over a longer period. On July 16, 1985, the corporation approved an agreement in principle for up to $720 million in price guarantees over a 10-year period, subject to restructuring the payments on the DOE-guaranteed loan.

However, DOE would not approve the proposed agreement. DOE concluded that current and projected oil and natural gas prices were not high enough to make the project economical even with the proposed assistance. DOE was concerned that the proposal would not assure long-

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term project operations at a reasonable cost to the taxpayers and the nation.

Plant Activities

From a technical standpoint, the project progressed well and has met production performance criteria for commercial operations. It was completed on time and within cost estimates. Since July 1984, the project produced and sold synthetic natural gas as part of its operational startup and testing activities. As of July 31, 1985, revenues from sales of synthetic gas totaled $153 million.

According to the ANG Coal Gasification Company, the plant has had some technical problems and plant modifications are required in order to meet design specifications and environmental control standards. The most significant operational problem needing correction involved the sulfur removal unit's failure to meet pollution emission levels specified in the state's construction permit. Great Plains' capital project budget for 1985-86 included $81 million for plant modification projects.

Recommendations

Since this is a status report, GAO is not making any recommendations.

Agency Comments

GAO requested comments on this report from DOE and the U.S. Synthetic Fuels Corporation. DOE stated that it had no formal comments. The Synthetic Fuels Corporation stated that the report accurately summarizes the events that occurred. Both agencies suggested certain clarifications, which were incorporated where appropriate. (See apps. I and II.)

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Contents

Executive Summary		2
Chapter 1 Introduction		8
	Project Description	8
	Project Costs	9
	DOE Audits of Costs	10
	Project Management and Oversight	11
	Objectives, Scope, and Methodology	11
Chapter 2 Great Plains Sponsors Withdraw From Project and Default on Federal Guaranteed Loan		14
	Reduced Financial Viability Prompts Request for SFC Assistance	14
	Negotiations Yield Tentative Agreements for SFC Assistance	15
	DOE Rejects Proposed Assistance Agreement; Great Plains Terminates Participation in the Project	17
	DOE Directs ANG to Continue Operations	18
Appendixes		
	Appendix I: Advance Comments From the Department of Energy	22
	Appendix II: Advance Comments From the U.S. Synthetic Fuels Corporation	23
Tables		
	Table 1.1: Great Plains Partners, Parent Firms, and Percentages of Equity	9

Abbreviations

ANG	ANG Coal Gasification Company
Btu	British thermal unit
DOE	Department of Energy
EMD	Energy and Minerals Division
GAO	General Accounting Office
OIG	Office of the Inspector General
RCED	Resources, Community, and Economic Development Division
SFC	U.S Synthetic Fuels Corporation

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Chapter 1

Introduction

The Department of Energy Act of 1978—Civilian Applications (Public Law 95-238)—authorizes the Department of Energy (DOE) to provide loan guarantees for alternative fuel demonstration projects. The act requires the Comptroller General of the United States to audit recipients of the guarantees every 6 months and to report to the Congress on the status of the loan.[1]

The Secretary of Energy awarded a loan guarantee under the act to Great Plains Gasification Associates (Great Plains), Bismarck, North Dakota, on January 29, 1982, for up to 75 percent of the construction and startup costs of a project to produce synthetic natural gas from coal. The Department of the Treasury's Federal Financing Bank agreed to loan Great Plains up to $2.02 billion of the estimated maximum $2.76 billion project cost; DOE would guarantee the loan amount. Great Plains was to finance the remaining costs with its own equity. The loan and guarantee are "nonrecourse," meaning that DOE's recourse is limited to the project assets upon default by Great Plains. As of July 31, 1985, Great Plains had borrowed about $1.54 billion, and the partners had contributed $493 million[2] in equity to the project.

Construction of the project began in August 1981 and was essentially completed by December 1984 as scheduled. As of August 1, 1985, the project was in the operational startup and testing phase. Great Plains has been producing and selling synthetic natural gas since July 1984, when production was initiated under the operational startup and testing program.

Project Description

The Great Plains coal gasification plant is the nation's first commercial-scale facility producing synthetic natural gas from coal. The facility, located in Mercer County, North Dakota, has three components: a gasification plant, a lignite coal surface mine, and a pipeline connecting the plant to an interstate network of natural gas pipelines. The synthetic gas is produced through a gasification process using crushed lignite coal. Smaller pieces of coal not used in the process are sold to a steam-powered, electric-generating plant owned by Basin Electric Power Cooperative, located next to the coal gasification plant. Basin Electric had

[1]Our previous reports are: EMD-82-55 (Mar. 6, 1982), GAO/EMD-82-117 (Sept. 14, 1982), GAO/RCED-83-112 (Apr. 8, 1983), GAO/RCED-83-212 (Sept. 20, 1983), GAO/RCED-84-113 (Mar. 22, 1984), GAO/RCED-84-85 (Sept. 18, 1984), and GAO/RCED-85-92 (May 28, 1985).

[2]Great Plains contributed a total of $537 million in equity. This includes about $44 million that DOE, prior to signing the loan guarantee agreement, determined was not eligible as equity for the project.

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agreed to buy about one-half of the coal mine production and share proportionally in the mine's development cost and related facilities.

Great Plains Gasification Associates—a partnership of five companies—owned the project. The partners, their percentages of equity, and their parent firms, were as follows:

Table 1.1: Great Plains Partners, Parent Firms, and Percentages of Equity

Partners and parent firms	Percentage of equity
Tenneco SNG, Inc.	
(an indirect subsidiary of Tenneco, Inc.)	30
ANR Gasification Properties Company	
(a subsidiary of American Natural Resources Company)	25
Transco Coal Gas Company	
(a subsidiary of Transco Energy Company)	20
MCN Coal Gasification Company	
(a subsidiary of MidCon Corporation, formerly Peoples Energy Corporation)	15
Pacific Synthetic Fuel Company	
(a subsidiary of Pacific Lighting Corporation)	10
Total	**100**

The project was designed to produce 137.5 million cubic feet of synthetic gas per day, the equivalent of about 23,000 barrels of oil. All of the gas produced during the project's initial 25 years of operation was to have been purchased by four pipeline companies, which are subsidiaries of four parent companies[3] of the Great Plains partners. The prices were set by a formula[4] that was tied to the prices of other energy products. The formula set a base price of $6.75 per million British thermal units (Btu's) in 1980 dollars, which was then to be adjusted quarterly for inflation and subject to various caps.[5]

Project Costs

Actual project costs were $1.93 billion through December 1984 and $2.07 billion as of July 31, 1985. The actual cost was less than the

[3]Pacific Lighting Corporation will not purchase any gas.

[4]This formula has been approved by the Federal Energy Regulatory Commission.

[5]During the first 5 years after the initial delivery of the gas, the price could not exceed the unregulated price of No. 2 fuel oil. From years 6 to 10, the price would be the greater of the average prices paid by the pipeline companies for the highest 10 percent of domestic natural gas or for Canadian and Mexican gas but in neither case higher than the unregulated price of No. 2 fuel oil. After 10 years, the price would be based on the price of unregulated domestic natural gas. If gas prices were regulated at that time, then the price paid for Canadian and Mexican gas would set the ceiling.

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planned cost for a variety of reasons: (1) the project's borrowing requirement and loan interest rate charges were less than anticipated, (2) prices on some subcontracts were lower than budgeted, (3) indirect labor expenses were less than budgeted, (4) engineering equipment costs were lower than anticipated, and (5) effective management.

The $2.07 billion total project cost as of July 31, 1985, included startup and testing costs of about $363 million. Great Plains capitalized this cost, as planned. More specifically, Great Plains added to the construction cost the expenses incurred during startup and testing, including operation and maintenance expenses. Great Plains also deducted revenues, which were primarily from sales of synthetic natural gas and by-products and from charges for transporting the gas to the interstate pipeline via the connecting pipeline. These revenues totaled about $161 million, including $153 million from sales of synthetic gas.

DOE Audits of Costs

In a previous report,[6] we recommended that DOE initiate audits to determine the eligibility of costs incurred by Great Plains that are to be paid out of DOE-guaranteed loan funds. In response to our recommendation, DOE's Office of the Inspector General (OIG) began to audit the project in November 1982.

As of August 1, 1985, the DOE-OIG had completed five audits. The first was a programmatic review and the next four covered costs incurred from the start of the project through August 31, 1984. We have commented on the results of these audits in previous reports.[7]

The DOE-OIG plans to perform two more audits. The first would assess the eligibility of costs incurred through June 23, 1985. The second audit would cover the period June 24 through July 31, 1985, and deal with any unresolved cost questions.

[6]Status of the Great Plains Coal Gasification Project–August 1982 (GAO/EMD-82-117, Sept. 14, 1982).

[7]Status of the Great Plains Coal Gasification Project–Summer 1983 (GAO/RCED-83-212, Sept. 20, 1983), Status of the Great Plains Coal Gasification Project (GAO/RCED-84-113, Mar. 22, 1984), and Status of the Great Plains Coal Gasification Project–December 31, 1984 (GAO/RCED-85-92, May 28, 1985).

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Project Management and Oversight

Great Plains appointed the ANG Coal Gasification Company (ANG),[8] Bismarck, North Dakota, as project administrator. ANG was responsible for the construction, startup, and operation of the gasification plant. Before August 1985, Great Plains provided overall direction to ANG through a management committee composed of representatives from each of the partners.

On August 1, 1985, the Great Plains partners terminated their participation in the project and defaulted on the $1.54 billion DOE-guaranteed loan. (See ch. 2.) Since then, ANG has continued to operate the plant under DOE's direction. As provided for in the loan guarantee agreement, ANG is required to operate the plant in the event of a loan default. ANG is paid from project revenues.

At the federal level, DOE's Office of Oil, Gas, Shale, and Coal Liquids, Office of the Assistant Secretary for Fossil Energy, is responsible for monitoring the construction and operation of the Great Plains project. DOE headquarters delegated responsibility to its Chicago Operations Office for the day-to-day monitoring of the project, which included determining that a reasonable assurance of debt repayment existed. As discussed in chapter 2, DOE is examining its options concerning the plant's future.

Objectives, Scope, and Methodology

Our objectives were to report on (1) the status of Great Plains' attempt to obtain additional financial assistance from the U.S. Synthetic Fuels Corporation (SFC) and (2) the status of the project's operational startup activities. We made our review between March and August 1985 in accordance with generally accepted government auditing standards. We covered the project's progress from January 1, 1985, through August 1, 1985, except where otherwise noted.

The information provided is based partly on interviews with DOE officials in Chicago, Illinois, and Knoxville, Tennessee; an official of the North Dakota Health Department; and ANG project management officials in Bismarck and Mercer County, North Dakota. We also reviewed (1) Great Plains' monthly and quarterly reports submitted to DOE, (2) DOE's reports, (3) DOE's monitoring of operational startup activities, and (4) Great Plains' May 31, 1985, cash-flow projection.

[8]ANG is a wholly owned subsidiary of American Natural Resources Company.

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We requested comments on a draft of this report from DOE and SFC. DOE stated that it had no formal comments. SFC stated that the report accurately summarizes the events that occurred. Both agencies suggested certain clarifications, which were incorporated where appropriate. (See apps. I and II.)

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Great Plains Sponsors Withdraw From Project and Default on Federal Guaranteed Loan

On August 1, 1985, the Great Plains partners terminated their participation in the Great Plains coal gasification project and defaulted on the $1.54 billion DOE-guaranteed loan. From a technical standpoint, the project had progressed well. Great Plains completed the project on schedule and was producing and selling synthetic natural gas. The financial outlook, however, had changed for the worse from the favorable outlook that existed at the time the loan guarantee agreement was signed in January 1982.

Because of deteriorating financial projections, Great Plains in September 1983 began seeking financial assistance from SFC. In July 1985, after prolonged negotiations, a proposed agreement for price-guarantee assistance and restructuring the payments on the DOE-guaranteed loan was developed. Any assistance proposal that would affect the loan repayment provisions in DOE's loan guarantee agreement with Great Plains would require DOE's approval. The Great Plains partners withdrew from the project when DOE would not support the proposal on the grounds that the proposed financial assistance would not assure long-term operation of the project at a reasonable cost to the taxpayer. DOE is reviewing all available options concerning the plant's future.

Reduced Financial Viability Prompts Request for SFC Assistance

As part of the loan guarantee agreement, DOE required Great Plains to submit a variety of financial data, including cash-flow projections showing future net income, distribution of funds to partners, capital investment requirements, and other information demonstrating both its ability to repay the loan DOE guaranteed and the project's profitability. Cash-flow projections prepared after the agreement was signed have reflected a progressively downward trend in energy prices.

The cash-flow projection Great Plains prepared in January 1982 when the loan guarantee was signed indicated a favorable financial outlook for the project. However, subsequent projections prepared in March and September 1983 indicated less optimistic outlooks. For example, the January 1982 projection showed that the project would earn pre-tax net income of $2.2 billion through 1996, the last year covered by the projection. In contrast, through that same year, the March 1983 projection indicated the project would incur pre-tax losses of $382 million, and the September 1983 projection showed pre-tax losses of $1.2 billion. The main reason for the difference was that the 1983 DOE-forecast energy prices used to estimate the project's synthetic gas prices were lower than the prices used in January 1982.

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The two 1983 projections further indicated that the project through 1996 would provide no distributions of funds to the partners. The March projection indicated that $841 million would be required from the partners to keep the project solvent, and the September projection indicated that $1.3 billion would be required. The 1983 projections showed a more favorable picture subsequent to 1996. For example, the September 1983 projection indicated that the project through 2009, the last year of its expected useful life, would earn pre-tax net income of $8.6 billion and provide distributions to the partners of $8.8 billion.

The September 1983 projection also addressed tax implications for the parent companies of the Great Plains partners. It forecast large project-related, after-tax losses and negative after-tax cash flow during the first 10 years of operations. The parent companies were concerned that the large after-tax losses and negative after-tax cash flow during those years and the risk of lower energy prices would diminish their consolidated earnings, tend to weaken their credit ratings, increase their cost of capital, and drain capital from their other businesses.

In September 1983 Great Plains applied to SFC for additional assistance in the form of price guarantees. In November 1983 Great Plains notified DOE that because of the projected reductions in the project's profitability as shown in the September 1983 cash-flow projection, it was considering terminating its participation in the project unless additional federal assistance was received on a timely basis.

Negotiations Yield Tentative Agreements for SFC Assistance

Following Great Plains' September 1983 application for assistance, negotiations between Great Plains and SFC were delayed and prolonged for various reasons, including vacancies on SFC's board of directors. Overall, however, the negotiations resulted in three tentative agreements for additional assistance.

SFC's April 1984 and April 1985 Proposed Agreements

In April 1984 Great Plains and the SFC staff tentatively agreed to assistance involving up to $790 million in SFC price guarantees for up to 10 years, $100 million of additional equity contributions by the partners, accelerated repayment of the DOE-guaranteed loan, and profit-sharing payments to SFC. A Great Plains cash-flow projection submitted to DOE in May 1984 showed that even with the proposed SFC assistance, the project would still not be as financially viable as anticipated in January 1982. Subsequently, both SFC and DOE revised downward their forecasts of future energy prices. In April 1985 representatives of Great Plains

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and SFC revised the proposed agreement terms, increasing the amount of price guarantees to $820 million and the amount of additional partner equity contributions to $190 million.

Other Approaches Explored

On May 21, 1985, SFC's board of directors decided to explore other approaches. They agreed with the Secretary of Energy's position that appropriate assistance should not provide a large federal subsidy for a brief period of operation, but rather should ensure long-term operation of the plant and maximum additions to the knowledge of synthetic fuels. To this end, SFC requested that DOE and the Federal Financing Bank restructure and extend the schedule for repayment of the DOE-guaranteed debt to permit a lower level of SFC price guarantees over a longer period.

On May 31, 1985, Great Plains submitted to DOE a cash-flow projection that depicted the financial outlook for the project, assuming Great Plains did not obtain SFC price guarantees. In contrast to the January 1982 projection, the May 1985 cash-flow projection showed, among other things, that the project would lose $2.8 billion rather than realize net income of $2.2 billion by 1996, and additional capital of $3.7 billion would be needed— rather than $86 million—to keep the project solvent. Through 2009 the projection showed that the project would incur a cumulative net loss of $2.7 billion.

The forecast decrease in the project's net income was due primarily to a $5.7 billion decrease in projected revenue from sales of its synthetic natural gas during 1985-96. The decreased gas sales revenue resulted because the sales prices in the May 1985 projections were 46 to 71 percent lower than those projected in 1982. For example, the projected prices[1] for the years 1985 and 1990 were $5.59 and $4.47, respectively, as compared with $10.34 and $15.48, respectively, in the 1982 projection.

Additionally, the May 1985 projection indicated a much more adverse outlook for project-related, after-tax income and cash flow to the parent companies. As compared with the September 1983 projection, which was the first projection to report after-tax implications, the May 1985 projection indicated, during the first 10 years of operation, after-tax net losses of $1 billion rather than $718 million, and negative after-tax cash

[1]Prices are per million Btu's in current-year dollars—not discounted.

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flows of $896 million rather than $404 million. The 1985 projection indicated after-tax losses during the plant's estimated 25-year life (1985-2009) of $759 million and negative cash flows of $773 million.

Following SFC's May 21, 1985, decision to explore other approaches for assisting the project, Great Plains and DOE entered into a "standstill" agreement, effective June 24, 1985, aimed at keeping the plant in operation through July 1985, in the belief that SFC assistance would be arranged by August 1, 1985. The agreement, in effect, enabled Great Plains to obtain loan funds for payments of interest and principal due July 1 without related contribution of equity by the partners because DOE delayed the requirement for the equity to August 1, 1985.

SFC's July 1985 Proposed Agreement

On July 16, 1985, SFC's board of directors approved an agreement in principle for up to $720 million in SFC price guarantees for Great Plains over a 10-year period. It was subject to a restructuring of the DOE-guaranteed Federal Financing Bank loan. More specifically, Great Plains would default on the loan payment, and DOE would prepay $673 million of the loan from its default reserve fund. Great Plains would agree to repay the $673 million in 2009. Mandatory repayments of the remainder of the Federal Financing Bank loan would not be required earlier than 1996. The proposed terms of the tentative Great Plains-SFC agreement also provided for the use, through 1987, of project-related, after-tax cash flow of the parent firms and additional equity contributions by the partners to prepay the DOE-guaranteed debt.

DOE Rejects Proposed Assistance Agreement; Great Plains Terminates Participation in the Project

DOE did not accept the July 1985 SFC price-guarantee assistance and debt-restructuring proposal for the project. On July 30, 1985, the Secretary of Energy stated that the proposal represented the best that could be achieved under the circumstances, but that circumstances had changed appreciably in that oil and natural gas prices were not high enough to make the project economical. The secretary further stated that the parent firms of the Great Plains partners were unwilling to increase their exposure significantly in the hopes of future profitability. The secretary concluded that the proposal would not provide assurance of long-term operation of the project at a reasonable cost to the taxpayers and the nation.

In view of DOE's action rejecting the proposed assistance, on August 1, 1985, the Great Plains partners notified DOE that under the termination

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provisions of the loan guarantee agreement and the standstill agreement, they were terminating their participation in the project, effective immediately. The Great Plains partners thus defaulted on the DOE-guaranteed loan. As of July 31, 1985, the outstanding debt under the loan was $1.54 billion.

DOE Directs ANG to Continue Operations

As a result of Great Plains' default on the DOE-guaranteed loan, DOE directed ANG, the plant operator, to continue operations while DOE studies all options available concerning the plant's future. The options include operating (as a government-owned, contractor-operated facility), leasing, selling, shutting down, mothballing, and scrapping the facility. The plant construction is complete, and the plant has met production performance criteria for commercial operation. However, the plant requires a number of modifications to meet design specifications and environmental control standards.

Construction Completed and Production Underway

Construction of the pipeline from the plant to the interstate pipeline network was completed in August 1983, 2 months ahead of schedule. The gasification plant was completed in November 1984 and the adjoining coal mine in December 1984. Both were completed as scheduled. However, because technical problems disclosed in testing prevented the production of gas at an acceptable sustained rate of production, the plant was not placed in service (commercial operation) by the target date of December 1, 1984.

In March 1985 DOE and Great Plains agreed to a clarification of the in-service date. The clarification provided that it would be the date when the plant had operated for any 90-day period commencing after December 1, 1984, at an average of 70 percent of design capacity and after each train of the plant (the plant has two rows of seven gasifiers called trains) had produced at an average of 100 percent of design capacity for 3 consecutive days. The plant achieved the in-service performance criteria for its two trains during March and April 1985 and the overall performance criteria on June 14, 1985.

Although the plant met the technical performance criteria in June 1985, it was not placed in service. Great Plains was unwilling to place the plant in service because in its view, a financially viable commercial operation could not be assured without the execution of a price-guarantee agreement with SFC. This in-service date was important because upon placing the plant in commercial operation, Great Plains would

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start accounting for revenues and expenses on a profit-or-loss basis rather than capitalizing them as part of startup cost, and thus would begin incurring large losses. As discussed above, Great Plains' efforts to obtain additional assistance were unsuccessful.

According to its project management plan, Great Plains was to operate the plant at a rate of 125 million cubic feet of synthetic natural gas daily (91 percent of design capacity), but was not expected to achieve that rate of production until 1988, the fourth year of operation. For 1985, the scheduled first year of commercial operation, the plan called for Great Plains to produce synthetic natural gas at the rate of 96 million cubic feet a day, or 70 percent of design capacity.

Great Plains began producing synthetic natural gas under the startup and testing program on July 28, 1984. From July 28 through December 31, 1984, it produced and sold 7.4 billion cubic feet of synthetic natural gas, or an average of 47 million cubic feet a day (34 percent of design capacity).

During the period January 1, 1985, through July 31, 1985, Great Plains produced and sold 20.9 billion cubic feet of synthetic natural gas, or an average of 98.5 million cubic feet a day. Production during this period represented 72 percent of design capacity.

Significant Modifications Needed

While the plant has met production performance criteria for in-service status, technical problems still exist and a number of plant modifications are required for the plant to meet design specifications and environmental standards. Our last report[2] stated that certain technical problems disclosed during operational startup testing had prevented the plant from being placed in service on the originally scheduled date of December 1, 1984. Those problems involved six systems or areas: (1) coal fines separation, (2) ash disposal, (3) wastewater treatment, (4) boiler feed water, (5) the rectisol unit, whose primary function is to remove certain elements or impurities from the synthetic natural gas, and (6) the Stretford unit, whose primary function involves the control of air pollution.

According to ANG officials, solutions for the problems with the first five systems had been identified and the most significant problem still to be

[2]Status of the Great Plains Coal Gasification Project-- December 31, 1984 (GAO/RCED-85-92, May 28, 1985).

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corrected concerned the Stretford unit. This unit is essential to the plant's meeting the North Dakota air pollution standards. ANG officials believed the Stretford unit's capacity was under-designed. After evaluating various expansion and operation alternatives, Great Plains included $19 million in its capital project budget to correct the Stretford unit's deficiencies.

Great Plains' capital project budget for 1985 and 1986 provided for the expenditure of $81 million for 150 plant modification projects. Major expenditures were planned, for example, for the areas of odor control ($10 million), water management ($18 million), and air pollution control ($19 million).

Under its original schedule, Great Plains was to complete required environmental testing and then receive a permit to operate by September 1985. To receive this permit, Great Plains was required to demonstrate by performance testing that it was able to meet North Dakota standards for controlling air pollution. Under state law and Great Plains' permit to construct, Great Plains was required to conduct all performance testing within 180 days of initial startup. Initial startup is considered to have occurred in July 1984, when the plant began producing and selling synthetic natural gas.

Since Great Plains could not meet the 180-day requirement because of unanticipated problems and the complexity of the project, Great Plains and North Dakota, in March 1985, agreed to extend the time period to September 1986. With the last test scheduled for September 1986, the expected date for obtaining the permit to operate was October 1986.

DOE's technical monitor told us that DOE concurred with Great Plains' assessment of the above six areas and systems.

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Advance Comments From the Department of Energy

Department of Energy
Washington, DC 20585

OCT 18 1985

Mr. J. Dexter Peach
Director, Resources, Community, and
Economic Development Division
U. S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

The Department of Energy (DOE) appreciates the opportunity to review and comment on the GAO draft report entitled "Status of the Great Plains Coal Gasification Project" - August 1, 1985. DOE has no formal comments. Comments of an editorial nature have been provided directly to members of the GAO audit staff.

Sincerely,

Martha O. Hesse
Assistant Secretary
Management and Administration

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Advance Comments From the U.S. Synthetic Fuels Corporation

United States Synthetic Fuels Corporation
2121 K Street, N.W. Washington, District of Columbia 20586 Telephone (202) 822-6600

October 17, 1985

Mr. J. Dexter Peach
Director Resources, Community and
Economic Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

Thank you for the opportunity to review the draft "Semiannual Report by GAO on the Status of the Great Plains Coal Gasification Project: January 1 - August 1, 1985." The report appears to summarize accurately the events of this period with three minor exceptions.

In its meeting on July 16, 1985, the Corporation's Board of Directors approved financial and other key terms for a $720 million price guarantee to the project which had been agreed to in principle by the Corporation's negotiating team and project representatives. This approval was subject to the restructuring of the existing DOE-guaranteed debt and the making of necessary findings and determinations under the Energy Security Act. The Board also voted to notify the Secretary of Treasury that his earlier certification and reservation of $790 million in the Energy Security Reserve for the project should be reduced to $720 million. However, the Board did not at that time (or later) approve for execution a price guarantee assistance agreement for the Great Plains project. The Board had directed the completion of an assistance agreement for consideration at its July 30, 1985 meeting, but when DOE indicated it would not restructure the project's guaranteed debt as contemplated by the negotiated price guarantee terms, the Board took no further action. Accordingly, the references to the Board's action on pages ii, iii and iv should be modified to show that only an agreement in principle was approved by the Board.

Now on pp. 2 and 3

As a second point, the discussion in the second paragraph on page 11 should indicate that the "stand still" agreement provided for a delay of contribution of equity by the partners until August 1, 1985, not a waiver.

Now on p. 17

Finally, for clarity, the second paragraph on page 7 should indicate that the partners (or sponsors) rather than Great Plains withdrew from the project, since Great Plains is the project. A similar clarification should be made in the last paragraph on page 12.

Now on p. 14

Now on p. 17

Sincerely,

Edward E. Noble
Chairman of the Board

Attachment

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